**PROGRAMMING FUNDAMENTAL EXERCISE#2**

**QUESTION#1**

/\*#1. Assuming there are 7.481 gallons in a cubic foot, write a program that asks the user to

enter a number of gallons, and then displays the equivalent in cubic feet\*/

#include<iostream>

using namespace std;

int main()

{

//1 cufoot=7.481 gallons

//7.481 gallon=1cufoot

//for example cufoot=2gallons then 2gallons/7.481=cufoot

int gallon,cufeet;

cout<<"Enter number of gallons:";

cin>>gallon;

cout<<"Equivalent in cubic feet:"<<(float)(gallon/7.481);

return 0;

}

**QUESTION#2**

/\*2. Write a program that generates the following table:

1990 135

1991 7290

1992 11300

1993 16200

Use a single cout statement for all output.\*/

#include<iostream>

#include<iomanip>

using namespace std;

int main()

{

//using of single cout statement

int a,b,c,d;

a=1990,b=135;

cout<<left<<setw(5)<<a<<right<<setw(3)<<b<<endl;

a=1991,b=7290;

cout<<left<<setw(5)<<a<<right<<setw(3)<<b<<endl;

a=1992,b=11300;

cout<<left<<setw(5)<<a<<right<<setw(3)<<b<<endl;

a=1993, b=16200;

cout<<left<<setw(5)<<a<<right<<setw(3)<<b<<endl;

return 0;

}

**QUESTION#3**

/\*3. Write a program that generates the following output:

10

20

19

Use an integer constant for the 10, an arithmetic assignment operator to generate the

20,and a decrement operator to generate the 19\*/

#include<iostream>

using namespace std;

int main()

{

int num=10;

cout<<num<<endl;

num\*=2;

cout<<num<<endl;

cout<<--num;

return 0;

}

**QUESTION#5**

/\*5. A library function, islower(), takes a single character (a letter) as an argument

and returns a nonzero integer if the letter is lowercase, or zero if it is uppercase.

This function requires the header file CTYPE.H. Write a program that allows the user

to enter a letter, and then displays either zero or nonzero, depending on whether a

lowercase or uppercase letter was entered. (See the SQRT program for clues.)\*/

#include<iostream>

#include<cctype>

using namespace std;

int main()

{

char ch;

cout<<"Enter any letter:";

cin>>ch;

bool status=isupper(ch);

cout<<"The character is lower case??? "<<(boolalpha)<<status<<endl;

return 0;

}

**QUESTION#6**

/\*6. On a certain day the British pound was equivalent to $1.487 U.S., the French franc was

$0.172, the German deutschemark was $0.584, and the Japanese yen was $0.00955.

Write a program that allows the user to enter an amount in dollars, and then displays this

value converted to these four other monetary units.\*/

#include<iostream>

using namespace std;

int main()

{

/\*british pound=$1.487

french franc=$0.172

German deut=$0.584

japanese yen=0.00955\*/

int dollar;

cout<<"Enter amount in dollars:";

cin>>dollar;

cout<<"Amount in british pound:"<<(float)(dollar/1.487)<<endl;

cout<<"Amount in french franc:"<<(float)(dollar/0.172)<<endl;

cout<<"Amount in german deut:"<< (float)(dollar/0.584 )<<endl;

cout<<"Amount in japanese yen:"<< (float)(dollar/0.00955) <<endl;

return 0;

}

**QUESTION#7**

/\*7. You can convert temperature from degrees Celsius to degrees Fahrenheit by multiplying

by 9/5 and adding 32. Write a program that allows the user to enter a floating-point

number representing degrees Celsius, and then displays the corresponding degrees

Fahrenheit.\*/

#include<iostream>

using namespace std;

int main()

{

//f=(c+32)\*(9/5)

float celcius;

cout<<"Enter celcius degrees in points:";

cin>>celcius;

float fehrenheit=(celcius+32)\*(9/5);

cout<<"Corresponding value in degrees fehrenheit:"<<fehrenheit;

return 0;

}

**QUESTION#8**

/\*8. When a value is smaller than a field specified with setw(), the unused locations

are, by default, filled in with spaces. The manipulator setfill() takes a single

character as an argument and causes this character to be substituted for spaces in

the empty parts of a field. Rewrite the WIDTH program so that the characters on each

line between the location name and the population number are filled in with periods

instead of spaces, as in Portcity.....2425785\*/

#include<iostream>

#include<iomanip>

using namespace std;

int main()

{

char ch='.';

string city="portcity";

long int popul=2425785;

cout<<setw(8)<<city<<setfill(ch)<<setw(15)<<popul;

return 0;

}

**QUESTION#9**

/\*9Write a program that encourages the user to enter two fractions, and then displays their

sum in fractional form. (You don’t need to reduce it to lowest terms.) The interaction

with the user might look like this:

Enter first fraction: 1/2

Enter second fraction: 2/5

Sum = 9/10

You can take advantage of the fact that the extraction operator (>>) can be chained to

read in more than one quantity at once:

cin >> a >> dummychar >> b;\*/

#include<iostream>

using namespace std;

int main()

{

int a,b,c,d;

char ch;

cout<<"Enter first fraction:";

cin>>a>>ch>>b;

cout<<"enter second fraction:";

cin>>c>>ch>>d;

int x=a\*d;

int y=b\*c;

int z=b\*d;

cout<<"sum:"<<x+y<<"/"<<z;

return 0;

}

**QUESTION#10**

//10

#include<iostream>

using namespace std;

int main()

{

/\* old unit

1 pound =20 shillings

1 shilling=12 pence

new system

1 pound=100pence

\*/

int pounds,shillings,pence;

cout<<"Enter pounds:";

cin>>pounds;

cout<<"Enter shillings:";

cin>>shillings;

cout<<"Enter pence:";

cin>>pence;

float x=(float)shillings/20;

float y=(float)pence/100;

float decimal\_pounds=pounds+x+y;

cout<<"Decimal pounds:"<<decimal\_pounds;

return 0;

}

**QUESTION#11**

//11

#include<iostream>

#include<iomanip>

using namespace std;

int main()

{

string a,b,c,d,e;

a="Last name",b="First name",c="street address",d="Town",e="State";

cout<<left<<setw(11)<<a<<left<<setw(12)<<b<<left<<setw(18)<<c<<left<<setw(14)<<d<<left<<setw(5)<<e<<endl;

a="Jones",b="Bernard",c="109 Pine Lane",d="Littletown",e="MI";

cout<<left<<setw(11)<<a<<left<<setw(12)<<b<<left<<setw(18)<<c<<left<<setw(14)<<d<<left<<setw(5)<<e<<endl;

a="O'Brian",b="Coleen",c="42 E. 99th Ave.",d="Bigcity",e="NY";

cout<<left<<setw(11)<<a<<left<<setw(12)<<b<<left<<setw(18)<<c<<left<<setw(14)<<d<<left<<setw(5)<<e<<endl;

a="Wong",b="Harry",c="121-A Alabama St.",d="Lakeville",e="IL";

cout<<left<<setw(11)<<a<<left<<setw(12)<<b<<left<<setw(18)<<c<<left<<setw(14)<<d<<left<<setw(5)<<e<<endl;

return 0;

}

**QUESTION#12**

#include<iostream>

using namespace std;

int main()

{

char ch='\x9c';

float decpounds;

cout<<"enter:";

cin>>decpounds;

int pounds=decpounds;

float decfrac=decpounds-pounds;

int shill=decfrac\*20;

int penc=decfrac\*12;

cout<<ch<<pounds<<"."<<shill<<"."<<penc;

return 0;

}